(g) the tenure of office, the terms and manner of appointment, and the duties of examiners and examining Boards;

(h) the discipline to be enforced in regard to graduates and under-graduates;

(i) the membership of the University, the duties and privileges of members and removal from membership;

(j) the admission of students to the University and its examinations; and

(k) all such other subjects as are required or authorised by the Regulation to be prescribed by means of Ordinances.

(3) The First Ordinances shall be those set out in Schedule II.

(4) The Senate from time to time may make new or additional Ordinances or repeal the Ordinances in force.

(5) The Council shall have power to draft or propose to the Senate Ordinances to be made by the Senate and it shall be the duty of the Senate duly to consider the same.

(6) All new Ordinances and additions to the Ordinances, and all amendments and repeals of the Ordinances shall, before they come into effect, require the previous approval of the Government, which may sanction, disallow or remit the same for further consideration.

Miscellaneous.

Subsidiary Rules.

22. The Council, the Senate and other bodies that may be constituted under the Regulation and the Ordinances may make such subsidiary rules, not inconsistent with this Regulation and the Ordinances in force, as may be required to regulate the conduct of the business entrusted to them severally.

Acts during vacancies.

23. No act or proceeding of the University shall be deemed to be invalid merely by reason of any vacancy in any class of the Fellows or members of the Senate or Council, or by reason of the total number of Fellows or of members of the profession of education being less than the minimum prescribed by this Regulation, at the time any such act or proceeding is done or had.

SCHEDULE II.

FIRST ORDINANCES OF THE UNIVERSITY.

THE SENATE.

1. Every fellow elected and nominated under the Ordinances shall, unless his Fellowship is previously vacated by resignation or other cause, hold office for two years, but shall be eligible for re-election or re-nomination at the close of the term of office.

2. All casual vacancies among elected members shall be filled up by the body which elected the member whose place has become vacant.

3. The Senate may, for gross misbehaviour unfitting a member in its opinion for his office, and after hearing such member or any other member nominated by him on his behalf, request that his appointment be cancelled under Section 7 (6) of the Regulation.

4. Subject to the Regulation and any Ordinances made in pursuance thereof, the Senate shall, in addition to all other powers vested in it, have the following powers, viz.:—

(a) to discuss and declare an opinion on any matter whatsoever relating to the University;

(*b*) to make recommendation to the Council as regards the removal of any Professor or other teacher of the University or as regards the appointment of additional Professors or other teachers;

(*c*) to formulate, modify or revise schemes for the organization of Faculties of the University and to assign to such Faculties their respective subjects and also to report to the Council as to the expediency of the abolition, combination, or sub-division of any Faculty;

(*d*) to make rules for dress and medical inspection of pupils in Colleges; and

(*e*) to fix, subject to any conditions made by the Founders, which are accepted by the University, the times and modes of awarding, and the conditions of competition for, Fellowships, Scholarships and other Prizes, and to award the same.

5. The Senate shall have no power to revise orders of the Council dealing with the executive government of the University.

6. Any member of the Senate shall be empowered to bring forward a resolution dealing with any matter contained in the proceedings of the Council, or with any question arising from the budget or otherwise germane to the affairs of the University. Such resolution, if carried, shall be forwarded to the Council, and the Council shall inform the Senate in due course of the action taken. The Senate shall have power to make thereupon a representation to the Government on the subject, should the Senate not be satisfied with, or disapprove of, the course of action adopted by the Council.

THE COUNCIL.

7. The elected and nominated members of the Council shall hold office for a term of two years. All casual vacancies may be filled up by the authority which elected or nominated the member whose place has become vacant. Every member of the Council whose term has expired shall be eligible for re-election or renomination as the case may be.

8. Subject to the Regulation, and the Ordinances made in pursuance thereof, and to any general or special orders of Government, the Council shall, in addition to all other powers vested in it, have the following powers, *viz.*:—

(*a*) To determine from time to time the number of Professors, Assistant Professors, Readers, Lecturers and other members of the teaching staff as may be necessary for the University and its constituent Colleges;

(*b*) to make such appointments as may be within their powers, *i.e.*, appointments carrying a monthly salary of less than Rs. 100, and to make recommendations to Government concerning higher appointments;

(*c*) in the case of appointments within their power of disposal, to delegate, subject to the general control of the Council, the power of appointment to such authority or authorities as the Council may from time to time, by general or special resolution, direct;

(*d*) to manage and regulate the finances, accounts, investments, property, business, and all other executive affairs of the University and, for that purpose, to appoint such agents as they may think fit;

(*e*) to invest any moneys belonging to the University including any unapplied income to such stocks, funds, shares, or securities, as they shall from time to time think fit, or in the purchase of immoveable property in Mysore, and vary such investments from time to time;

(*f*) to transfer or accept transfers of any moveable or immoveable property on behalf of the University;

(*g*) to provide the buildings, premises, furniture and apparatus and other means needed for carrying on the work of the University;

(*h*) to enter into, vary, carry out, and cancel contracts on behalf of the University;

(*i*) to entertain, adjudicate upon and, if thought fit, redress any grievances of the officers of the University, the Professors, the teaching staff, the Graduates, Under-graduates, and the University servants who may for any reason feel aggrieved;

(*j*) to maintain a register of donors to the University;

(*k*) to select a seal for the University and provide for the custody and use of the seal; and

(*l*) to draft Ordinances as and when they see fit and submit the same to the Senate for consideration and approval.

9. It shall be the duty of the Council:—

(i) to order examinations in conformity with the Ordinances, and to fix dates for holding them;

(ii) to appoint examiners, and, if necessary, to remove them, and to fix their fees, emoluments, travelling and other allowances, and to appoint Boards of Examiners and Moderators;

(iii) to declare the results of the various University Examinations and to recommend for degrees, honours, diplomas, licenses, titles and marks of honour;

(iv) to award stipends, scholarships, medals, prizes and other rewards in conformity with the ordinances and conditions prescribed for their award;

(v) to consider or make such reports or recommend such action as may be deemed necessary on proposals or motions brought forward by the members of the Senate and Faculties for consideration by the Senate;

(vi) to publish lists of prescribed or recommended text-books and courses of study; and

(vii) to prepare such forms and registers as are, from time to time, prescribed by the Ordinances.

THE FACULTIES.

10. The Faculties shall be constituted every two years.

Each Faculty shall be composed of—

(*a*) Professors of the subjects relating to the Faculty,

(*b*) Such other Fellows of the Senate, not exceeding ten in number, as may be assigned to it by the Council,

(*c*) Such Assistant Professors, Lecturers and other teachers of the University and such other persons, not exceeding ten in all, as may be appointed thereto by the Council on the recommendation of the Senate.

11. There shall be a Dean of each Faculty who shall be a fellow elected by that Faculty, and who shall hold office till the next reconstitution of the Faculty. He shall preside at the meetings of the Faculty.

12. A Faculty shall have power—

(i) to consider and report on any matter referred to it by the Senate or by the Council;

(ii) to draft regulations in regard to courses of study and examinations prescribed by the University and to lay such regulations before the Council in order that they may be brought before the Senate;

(iii) to remit any matter to a Board of Studies comprised within the Faculty for consideration and report;

(iv) to consider any report or recommendation of any Board of Studies;

(v) to hold meetings of the Faculty or a Committee of the Faculty along with any other Faculty or a Committee thereof, for the discussion of any matter of common interest; and

(vi) to make recommendations as to the appointment of Examiners.

BOARDS OF STUDIES.

13. There shall be a Board of Studies in each of the following branches of knowledge:—

i. English and French.
ii. Kannada, Telugu and Tamil.
iii. Urdu and Persian.
iv. Mathematics.
v. Physical Science.
vi. Natural Science.
vii. History and Economics.
viii. Mental and Moral Science.
ix. Sanskrit.
x. Teaching.

14. The Members of the Boards shall be appointed by the Council and shall consist of University Professors and other persons possessing special knowledge of the subjects dealt with by the Boards to which they are appointed.

15. A member of a Board of Studies shall hold office for two years and shall be eligible for re-appointment.

16. No Board shall consist of fewer than three or more than eight members.

17. Each Board shall elect its own Chairman.

18. The duties of the Boards shall be to recommend text-books, to recommend courses of study in their respective departments, to advise in all matters referred to them by the Council or by the Faculty to which they belong.

19. Any Board may consult specialists who are not members of the Board.

BOARD OF AUDIT.

20. A Board of Audit consisting of three Fellows not being members of the Council, shall be appointed by the Senate at its annual meeting.

21. The Board shall meet ordinarily once in three months, and at other times when convened by the Vice-Chancellor.

22. The Board shall examine and audit the University accounts and the accounts of the endowments and trust funds, consider ways and means and the financial effects of any important measures in contemplation, and make recommendations, when necessary, to the Council on all matters relating to the finances of the University. It shall also make an annual report to the Senate on the special features of the finances of the last preceding year.

23. Members of the Board shall hold office until the next annual meeting of the Senate. They shall be eligible for re-appointment at the expiration of their term of office. All vacancies in the Boards occurring in the course of the year shall be filled up by the Council.

THE VICE-CHANCELLOR.

24. The Vice-Chancellor shall exercise general supervision over the educational arrangements of the University, regulate the admission of the students, and maintain the discipline of the University, for which he shall be responsible to the Council.

25. The Vice-Chancellor shall have power to convene any meeting of the Council and the Senate and to perform all such acts as may be necessary to carry out or further the provisions of the Regulation and the Ordinances.

26. If any emergency arises which in the opinion of the Vice-Chancellor requires that immediate action should be taken, the Vice-Chancellor shall take

such action as he deems necessary; and report the fact to the authority which in the ordinary course would have dealt with the matter.

THE REGISTRAR TO THE UNIVERSITY.

27. There shall be appointed a Registrar who shall also be Secretary to the Senate and the Council. The Registrar may be a member of the Senate but shall not be a member of the Council.

28. The Registrar shall be appointed by the Government on the recommendation of the Council.

29. He shall ordinarily hold office for a period of two years unless he vacates the office by resignation or other cause but shall be eligible for re-appointment.

30. It shall be the duty of the Registrar—

(*a*) to be the custodian of the records, library, common seal, and such other property of the University as the Council shall commit to his charge;

(*b*) to act as Secretary to the Council and to attend all meeting of the Senate, and the Council and any Committees appointed by the Senate, and the Council and to keep minutes thereof;

(*c*) to conduct the official correspondence of the Council and the Senate;

(*d*) to issue all notices convening meetings of the Senate, Faculties, Council, Boards of Studies, Boards of Examiners, and any Committees appointed by the Senate, the Faculties, the Council, or any of the Boards;

(*e*) to perform such other duties as may, from time to time, be prescribed by the Council, and generally to render such assistance as may be desired by the Vice-Chancellor in the performance of his official duties.

31. An Assistant Registrar may be appointed, if necessary, and there shall be a permanent staff of subordinate assistants and servants.

32. The scale of establishment for the offices of the University shall be fixed by the Council from time to time.

COMMITTEES.

33. The Council may from time to time appoint Committees, consisting of Fellows of the University and also, if the Council thinks fit, of persons who are not Fellows of the University, and may delegate to such Committees such duties as it thinks fit as regards administrative or other matters affecting the University or any particular Faculty or Department, or the management or supervision of any buildings or other property of the University.

34. The Senate, the Faculties, and the Boards of Studies, shall be similarly empowered to appoint Committees to deal with, and report on, any matter that falls within their sphere.

ADMISSION.

35. No one shall be permitted to enter the University in order to study for the B.A., or B.Sc. degree unless he has passed the University Entrance Examination of this University or the Intermediate Examination of any other Indian University.

36. No one shall be permitted to present himself for the University Entrance Examination, unless he has studied for a year at one of the Collegiate High Schools recognised by the University after he has successfully completed his High School course.

37. At the University Entrance Examination, a candidate shall be examined in*—

(1) English.

* *See* Appendix.

II. A second language (Kannada, Telugu, Tamil, Sanskrit, Hindustani, Persian or French.) When a student selects Sanskrit or Persian as one of his optional subjects, he shall be required to select for his second language a language other than Sanskrit or Persian.

III. One of the following groups of subjects :—

(*a*) Physics, Chemistry, and Mathematics *or* Natural Science;

(*b*) History, Logic, and Sanskrit *or* Persian *or* Elementary Economics.

38. As an exception, however, candidates who obtain promotion from the Junior Intermediate class of 1915-16 in either of the Colleges shall have the option of joining either the first year class of this University or the Senior Intermediate Class of the Madras University. Those who pass the Intermediate Examination of the Madras University from any College in 1915-16 or 1916-17, shall be admitted as students of the second year class of this University.

DEGREES.

39. The University may confer the following degrees :—.

BACHELOR OF ARTS (**B.A.**)
BACHELOR OF SCIENCE (**B.Sc.**)
MASTER OF ARTS (**M.A.**)
MASTER OF SCIENCE (**M.Sc.**)
BACHELOR OF TEACHING (**B.T.**)
DOCTOR OF LETTERS (**D.Lit.**) } Honorary.
DOCTOR OF SCIENCE (**D.Sc.**) }

40. The period of study necessary to qualify any student for graduation shall not be less than three years, all of which shall be subsequent to the date at which the student passes the University Entrance Examination or an examination recognised as equivalent to it.

41. A student shall be considered to have studied for a year at the University if he shall have attended the University lectures for such number of days during the year as may be prescribed by the Senate from time to time.

42. A candidate for the Master's degree shall have pursued his studies under the supervision of the University professors, under such rules as may be prescribed by the Council, for two years subsequent to his graduation.

43. A candidate for the degree of Bachelor of Teaching, shall have taken the Bachelor degree in Arts or Science in this or any other Indian University, and have attended for a year the prescribed course of study in this University.

COURSES OF STUDY.

44. All candidates for the B.A. degree shall be required to attend courses of study in the following subjects :—

I. English.

II. A second language (Kannada, Telugu, Tamil, Sanskrit, Hindustani, Persian or French). When a student selects Sanskrit or Persian as one of his optional subjects, he shall be required to select for his second language a language other than Sanskrit or Persian.

III. A. (*a*) in the first year,

(i) Mathematics, Physics, and Chemistry,

Or,

(ii) Zoology, Geology, and Botany.

(*b*) in the second year,

any two subjects in (i) *or* in (ii).

OR,

B. *Two* of the following subjects :—

(*a*) History.

(*b*) Economics and Political Science.

(*c*) Philosophy, Group I.

(*d*) Philosophy, Group II.

(*e*) Sanskrit *or* Persian.

Candidates for the B.Sc. degree shall be required to attend courses of study in the following subjects :—

I. English.

II. A second language (Kannada, Telugu, Tamil, Sanskrit, Hindustani *or* French), provided that French (*or* German) shall be studied in the third year.

III. (*a*) in the first year,

(i) Mathematics, Physics and Chemistry.

Or,

(ii) Zoology, Geology, and Botany.

(*b*) in the second and third years, two subjects, one principal and the other subsidiary, selected from the group studied in the first year.

46. DETAILS OF COURSES OF STUDY FOR THE B.A. DEGREE EXAMINATION.

I. ENGLISH.

(*a*) Text-books for detailed and non-detailed study.

(*b*) History and principles of literature with reference to prescribed books.

(*c*) Principles of style and eloquence.

(*d*) Composition.

II. SECOND LANGUAGE.

(a) Kannada.

(1) *Literature* :—

Text-books from the three periods.

(2) *Language* :—

Elementary knowledge of the grammar of old Kannada, and of rhetoric and prosody ; and the main outlines of the history of Kannada language and literature. No text-books will be used, but lectures will be given and an elementary hand-book covering the whole field will be prepared.

(3) *Composition and Translation* :—

General principles of composition and style ; and for translation, exercises to be chosen from good passages in English poetry and prose.

(b) Telugu.

(1) LITERATURE.

(2) LANGUAGE.

(3) COMPOSITION AND TRANSLATION.

(c) Tamil.

(1) LITERATURE.
(2) LANGUAGE.
(3) COMPOSITION AND TRANSLATION.

(d) Sanskrit.

(*a*) The detailed study of books prescribed from time to time.

(*b*) Grammar and Prosody as in Macdonell's "Sanskrit Grammar for Beginners" or Kale's "Smaller Sanskrit Grammar."

(*c*) The History of Literature as in Macdonell's "Sanskrit Literature" (Chapters X—XIV).

(*d*) Translation from English into Sanskrit and *vice versa*.

(e) Hindustani.

(1) LITERATURE.
(2) LANGUAGE.
(3) COMPOSITION AND TRANSLATION.

(f) Persian.

(1) PRESCRIBED BOOKS AND GRAMMAR.
(2) TRANSLATION.

(g) French.

(1) PRESCRIBED BOOKS AND GRAMMAR.
(2) TRANSLATION.

III. OPTIONAL SUBJECTS.

A. (a) Mathematics.

FIRST YEAR.

(*a*) ALGEBRA,
(*b*) TRIGONOMETRY,
(*c*) GEOMETRY, AND
(*d*) ANALYTICAL GEOMETRY.

(*a*) ALGEBRA.

Permutations and combinations. The Binomial theorem, any index, convergence and divergence of series. Indeterminate equations of the first degree.

(*b*) TRIGONOMETRY.

Properties of triangles and of the circles connected with them. Heights and distances. Division formulæ.

(*c*) GEOMETRY.

(i) *Theory*.

Concurrence and Collinearity. Loci. Elementary Maxima and Minima. The fundamental properties of the parabola.

Concurrence and Collinearity.—The use of signs as applied to lines, angles and areas. If two parallel lines are cut by three or more concurrent transversals, the corresponding segments are proportional; and the converse.

If X, Y, Z, are points in the sides BC, CA, AB of a triangle ABC, such that the perpendiculars to those sides at these points are concurrent, then

$$(BX^2-XC^2)+(CY^2-YA^2)+(AZ^2-ZB^2)=0;$$

or $$BX^2+CY^2+AZ^2=CX^2+BZ^2+AY^2,$$

and the converse.

If any transversal meets the sides BC, CA, AB of a triangle in D, E, F, then

$$AF.\ BD.\ CE=AE.\ CD.\ BF;$$

and conversely, if three points D, E, F taken on the sides BC, CA, AB of a triangle, satisfy the relation AF. BD. CE=AE. CD. BF, then D, E, F are collinear.

If the lines joining any point to the vertices A, B, C of a triangle meet the opposite sides in D, E, F;

then $$AF.\ BD.\ CE=FB.\ DC.\ EA;$$

and conversely, if three points D, E, F, taken on the sides BC, CA, AB of a triangle, satisfy the relation AF. BD. CE=FB. DC. EA, then AD, BE, CF are concurrent.

If two unequal similar figures are similarly placed, the lines joining the vertices of one to the corresponding vertices of the other are concurrent.

Loci.—If from a fixed point O a variable line is drawn, and in it points P, Q are taken, so that the ratio of OP to OQ is constant, then (1) if P moves along a straight line, the locus of Q is a parallel straight line; (2) if P moves along the circumference of a circle, the locus of Q is a circle.

The locus of a point which is such that the rectangle under its distances from the equal sides of an isosceles triangle is equal to the square on its distance from the third side, is the circle which touches the equal sides at the extremities of the third side.

If A, B are fixed points, and P a variable point such that the ratio of PA to PB is one of constant inequality, then the locus of P is a circle.

Given the base and vertical angle of a triangle, find the locus of its (1) incentre, (2) orthocentre, (3) centroid, (4) excentres.

If a triangle ABC of given species has one corner A fixed, another B always on a fixed line or circle, then the locus of C will be a line or circle.

Elementary Maxima and Minima.—When two sides of a triangle are given in length, the area of the triangle is greatest when they are placed at right angles.

The maximum triangle which can be inscribed in a given segment of a circle is that formed by joining the middle point of its arc to the extremities of the chord.

If A, B are two fixed points, and XY a fixed line; then for that point P in XY at which AP, BP make equal angles with XY,

(1) AP+PB is minimum, if A, B are on the same side of XY.

(2) AP~BP is maximum, if A, B are on opposite sides of XY.

If A, B are fixed points and P any point in a fixed line, the angle APB will be maximum, when the circle APB touches the fixed line.

Of all triangles having the same base and equal areas, the isosceles triangle has the minimum perimeter.

The maximum of isoperimetric triangles on the same base is the one whose other two sides are equal.

Of all polygons having all sides given but one, the maximum can be inscribed in a semi-circle having the undetermined side as diameter.

Of all isoperimetric polygons of the same number of sides, the equilateral is the maximum.

If P is any point in a given straight line AB, AP, PB is maximum and AP^2+PB^2 is minimum when P is the middle point of AB; of all rectangles, of given area, the square has the minimum perimeter.

The maximum parallelogram which can be inscribed in a triangle by drawing parallels to two of its sides, is that formed by drawing the parallels from the middle point of the third side.

(ii) *Practical Work.*

Simple cases of Orthogonal projection.

(*d*) ANALYTICAL GEOMETRY.

The point, the straight line and the circle.

SECOND AND THIRD YEARS.

(*a*) ALGEBRA,
(*b*) TRIGONOMETRY,
(*c*) GEOMETRY,
(*d*) INFINITESIMAL CALCULUS,
(*e*) DYNAMICS, AND
(*f*) ASTRONOMY.

(*a*) ALGEBRA.

Exponential and logarithmic series. Inequalities. Partial fractions. Elementary methods of summation of series. Theory of equations and elementary properties of determinants. (As in C. Smith's Higher Algebra.)

(*b*) TRIGONOMETRY.

De Moivre's theorem and its simple applications.

(*c*) PURE GEOMETRY.

Harmonic properties of the quadrilateral. Coaxal circles. Inversion. The fundamental properties of the conic sections. The geometry of the line, the plane, and the sphere.

(*d*) ANALYTICAL GEOMETRY.

Elementary plane analytical geometry as applied to conic sections (rectangular axes). The polar equation of a conic referred to the focus as origin. The general equation of the second decroe.

(*e*) INFINITESIMAL CALCULUS.

(As in A. E. H. Love's *The Elements of Differential and Integral Calculus*, Cambridge University Press.)

(*f*) DYNAMICS.

(As in Loney's *Statics and Dynamics* for beginners),
and in addition: Angular Momentum and Moment of Inertia in simple cases.

(*g*) ASTRONOMY.

(As in Parker's *Elements of Astronomy*.)

(b) Physics.

FIRST YEAR.

Mechanics, Hydrostatics, Heat, Sound, Light, Magnetism and Electricity. These subjects to be repeated as in the University Entrance Course with amplifications and such additions as may be possible, the treatment being more rigid and more attention being paid to the working of numerical problems than in the school course. In Electricity a certain amount of elementary electrostatics will be introduced.

SECOND AND THIRD YEARS.

In alternate years the two following groups of subjects will be lectured on—

Properties of matter, Sound and Heat.
Light, Electricity and Magnetism.

Properties of matter.—Elasticity. Compressibility of gases, liquids and solids. Rigidity. Strain due to longitudinal pull. Young's Modulus. Simple twisting of shafts and wires treated experimentally. Diffusion. Osmosis. Viscosity. Simple elements of the kinetic theory.

Sound.—Simple theory of wave motion. Interference and diffraction. Measurement of wave lengths and pitch.

Heat.—Calorimetry and thermometry. Conduction, convection and radiation of heat. Simple thermodynamics.

Light.—Simple physical optics and geometrical optics.

Electricity.—Elementary electrostatics treated quantitatively. Resistance and its measurement. Electromotive force and its measurement. Electrolysis. Thermo-electricity. Electromagnetic induction. The theory and practical use of the commoner electrical apparatus.

Magnetism.—Force on magnet in a magnetic field. Measurement of field strength. Terrestrial magnetism and its measurement.

(c) Chemistry.

FIRST YEAR.

The matter prescribed in the Syllabus for the University Entrance Course and in addition the following :—

The classification of the elements. Laws of chemical combination. Atomic theory, symbols and formulæ. Avogadro's hypothesis. Atomic and molecular weights. Chemical equations. Calculations.

The methods of preparation and the properties of the following elements and their principal compounds :—Hydrogen, sodium, potassium, copper, silver, magnesium, calcium, barium, zinc, mercury, boron, aluminium, carbon, silicon, tin, lead, nitrogen, phosphorus, arsenic, oxygen, sulphur, fluorine, chlorine, bromine, iodine, iron.

SECOND AND THIRD YEARS.

The descriptive portion will include the elements and their compounds studied in detail from the standpoint of the periodic classification, omitting the rare metals and the chemistry of carbon compounds.

Theoretical and Physical Chemistry.

Methods of determining equivalent, atomic, and molecular weights ; the atomic theory ; valency ; the properties of gases ; transition from gaseous to liquid state, vapour pressure and boiling point ; solutions and solubility, osmotic pressure ; theory of electrolytic dissociation ; electrolysis ; relation of chemical energy to electrical energy and to heat ; the law of mass-action ; speed of chemical change catalysis ; relation of physical properties to chemical constitution.

Practical Course.

Qualitative analysis of simple salts and of mixtures containing not more than two bases and two acids ; volumetric analysis ; inorganic preparations.

(d) Zoology.

FIRST YEAR.

1. *Outlines of General Biology.*—The distinctive properties of living and non-living bodies ; the special characters of animals and plants, their mode of occurrence, meaning of the terms Biology, Morphology, Physiology, Palæontology ; fossils, their mode of formation and the bearing of their study on Zoology and Geology, physical and Chemical properties of Protoplasm ; structure, growth and behaviour of the cell ;

formation of tissues and organs; division of physiological labour; elements of animal and vegetable physiology and reproduction; segmentation of the ovum; fertilisation in animals and plants; production and dispersal of seeds and spores; the principles of classification and the origin of species.

2. *Outlines of Zoology.*—The more important distinguishing external characters of the following primary sub-divisions of the animal kingdom:—

Protozoa, Cœlenterata, Annulata, Echinodermata, Arthropoda, Mollusca. Vertebrata (with proper omissions).

Practical Work.

(*a*) A complete examination of the external characters of the following types:—Earthworm, prawn, crab, beetle, dragon-fly, spider, scorpion, centipede, star-fish, fresh water mussel, snail, dog-fish and a bony fish.

(*b*) Microscopic study of Amœba, Paramœcium, and Hydra.

(*c*) Dissection of cockroach, frog and rabbit.

SECOND AND THIRD YEARS.

[NOTE.—Knowledge of groups of lower rank than orders will not be expected and particular attention will be devoted to the study of forms which have an economic importance.]

1. A study of the invertebrata as illustrated by:—

Protozoa. The leading types of the principal classes, with only a very general reference to pathogenic forms.

Porifera. The fresh water spouge and the bath sponge, with an allusion to sponge fishery.

Cœlenterata. A consideration of the outstanding examples of the principal groups including a study of the precious coral.

Annulata. Earthworm and medicinal leech.

Arthropoda. The more important types of the different classes with a special emphasis on insect study in its economic, industrial and sanitary aspects.

Echinodermata. A study of the leading examples.

Mollusca. The chief examples of the important classes including a study of the economic groups.

2. A study of the vertebrata as illustrated by:—

Pisces. Cartilaginous and bony fishes.

Amphibia. The frog and its life history.

Reptilia. A lizard, a chelonian and a snake; a reference to the chief kinds of snakes met with in Southern India, their recognition and treatment of snake bites.

Aves. The pigeon, the principal game birds of Southern India and the migratory forms.

Mammals. The rabbit; a brief study of the more important mammals found in Southern India, in such a way as to bring out the general relationship which their form may bear to their habits and mode of life.

Practical Work.

The first year college course treated more fully and in addition:—

(*a*) Dissection of earthworm, scorpion, fresh water mussel and pigeon.

(*b*) Microscopic study of vorticella, euglena and shells of foraminifera.

(*c*) Examination of transverse sections of earthworm and fresh water mussel.

(*d*) Osteology of the frog, pigeon and rabbit.

(e) Geology.

PHYSIOGRAPHY.

The earth as a planet, its general relations to the other members of the solar system, hypotheses as to the origin of the earth; form, size and density of the earth; its movements and their effects.

The Atmosphere, its composition, height, density, pressure, temperature, moisture and movements; whether, refraction, twilight and aurora-borealis.

The Hydrosphere, its composition, extent and distribution, depth, temperature and movements.

The Lithosphere, the chief constituents of the earth's crust, the general characters and mode of occurrence of igneous and sedimentary rocks, condition of the interior of the earth.

Agents of geological change, the hypogene and epigene agents of geological change, manner and results of their action, especially as influencing earth-sculpture the destruction, construction, and gradual evolution of the crust of the earth and of its surface features.

Fossils, the main conditions favourable for their formation and preservation and their value as interpreters of the past history of the earth.

Climates, their causes and distribution; glacial epochs.

Simple facts about the geographical and geological distribution of the chief types of plant and animal life. Antiquity of man. Views as to the age of the earth's crust.

MINERALOGY AND CRYSTALLOGRAPHY.

Symmetry; lines, planes and axes of symmetry; laws of Crystallography; the common holohedral hemihedral and hemimorphic crystal forms and combinations under each of the six crystal systems; the more important types of twins and twinning; drawing of the more important crystal forms; systems of crystal notation; use of the contact Goniometer.

The principal physical properties of minerals which aid in the recognition of the various mineral species.

Isomorphism, paramorphism, pseudomorphism and dimorphism.

The chief characteristics of all the more abundant minerals, including both those which are of geological interest and those of commercial value, their modes of occurrence and uses.

The practical determination of the chief physical and chemical properties of the commoner ores and minerals, including the use of the blowpipe.

PETROLOGY.

The classification and distribution of rocks, and the composition, structure, texture, origin and mode of occurrence of all the more important types and their metamorphic and altered forms.

Contact and Regional Metamorphism.

The macroscopic and microscopic examination of rocks, including the determination of the simpler optical characters of the chief rock forming minerals in parallel polarised light. Preparation of diagrams or sketches to represent features observed in rock sections under the microscope. Construction and use of a simple petrological microscope.

STRUCTURAL AND FIELD GEOLOGY.

The more important lithological and structural features of rocks, their origin or formation; structure of mineral veins. Diagrammatic sketches of the above.

Construction and Interpretation of geological maps and sections. Tracing of outcrops. Simple problems in structural geology.

STRATIGRAPHY AND PALAEONTOLOGY.

The chief petrological and palaeontological characters of the main geological divisions and their Indian representatives and the probable physical conditions under which they were formed.

Fossils, their nature and preservation. The main groups of vegetable and animal life and their distribution in time.

The characters, classification and distribution of the more important types of fossils—especially Indian; identification and sketching of fossils; causes for the imperfection of the geological record; the general succession of life as revealed thereby and the general evidence furnished in support of evolution; principles of correlation; homotaxis.

Practical Work.

Geological excursions to parts in and outside Mysore for nearly a month. Determination of rocks by their micro-characters and of minerals by the blowpipe, microscopic and other methods. Drawing of crystal forms, fossils and micro-sections, construction and interpretation of geological maps and sections. Problems in structural geology.

(f) Botany.

(Details to be prepared.)

B.—(a) History.

(1) OUTLINES OF GREEK AND ROMAN HISTORY.
(2) HISTORY OF ENGLAND.
(3) HISTORY OF EUROPE (476—1878).
(4) HISTORY OF INDIA.

(b) Economics and Political Science.

(1) THE BRITISH CONSTITUTION.
(2) RECENT ECONOMIC HISTORY OF ENGLAND.
(3) ECONOMICS.
(4) POLITICAL SCIENCE.

(c) Philosophy: Group I.

(1) LOGIC.
(2) PSYCHOLOGY.
(3) THEORY OF KNOWLEDGE.
(4) OUTLINES OF EUROPEAN PHILOSOPHY FROM DESCARTES TO HEGEL.
(5) OUTLINES OF INDIAN PHILOSOPHY.
(6) ELEMENTS OF PHILOSOPHY. (With special reference to a prescribed Philosophical Classic.)

(d) Philosophy: Group II.

(1) PSYCHOLOGICAL AND SOCIOLOGICAL GROUNDWORK, AND HISTORY, OF ETHICS.
(2) THEORY OF ETHICS.
(3) HISTORY OF POLITICAL THOUGHT.
(4) ANCIENT PHILOSOPHY.
(5) AN ETHICO-POLITICAL TREATISE.
(6) POLITICAL PHILOSOPHY.

(e) Sanskrit.

(1) DETAILED STUDY OF BOOKS—BOTH IN PROSE AND VERSE—PRESCRIBED FROM TIME TO TIME.

(2) HISTORY OF SANSKRIT LITERATURE.

(3) GRAMMAR AND HISTORY OF SANSKRIT LANGUAGE.

(4) TRANSLATION AND COMPOSITION.

The details of the course will be as follows:—

(1) *Detailed study* of (i) Suitable selections from *Vedic* literature—

(i) Mantras and
(ii) Brahmanas.

(ii) Representative selections form *classical* literature:

(i) *Kavya, Nataka, etc.,*
(ii) *Alankara* and
(iii) *Tarka.*

(2) *History of Sanskrit Literature.*—Especially in reference to works prescribed under (1).

(Macdonell's "History of Sanskrit Literature" to form the basis of study).

(3) (i) *Grammar.*—Declension and conjugation as in Monier Williams' "Sanskrit Grammar" or Kale's "Higher Sanskrit Grammar"; remaining portions as in Rajaraja Varma's "*Laghupaniniyam*" (pages 1—20, 50—67 and 53—404).

(ii) *History of Sanskrit Language.*—To be dealt with in lectures, in the third year, according to a syllabus.

(4) (i) Translation of unprepared passages from Sanskrit into English and *vice versa* (first two years).

(ii) Simple exercises in Sanskrit Composition (third year).

(e) Persian.

(1) DETAILED STUDY OF PRESCRIBED BOOKS.

(2) HISTORY OF PERSIAN LITERATURE.

(3) GRAMMAR AND HISTORY OF PERSIAN LANGUAGE.

(4) TRANSLATION AND COMPOSITION.

A knowledge of Arabic grammar will be expected from the candidates.

47. DETAILS OF COURSES OF STUDY FOR THE B. Sc. DEGREE.

(*To be prepared.*)

EXAMINATIONS.

48. The Examinations shall be held at such time, in such places, and in such manner as may be prescribed by the Senate.

49. There shall be boards of examiners for the following subjects, or groups of subjects.

i. English and French.
ii. Kannada, Tamil and Telugu.
iii. Hindustani and Persian.
iv. Sanskrit.
v. Mathematics.
vi. Physical Science.
vii. Natural Science.
viii. Mental and Moral Science.

ix. History and Economics.
x. Teaching.

50. At least one examiner who is not on the teaching staff of the University shall be appointed by the Council for each subject or group of subjects forming part of the course of studies required for University Degrees.

51. The Council shall issue detailed instructions to examiners and determine the scale of remuneration to be paid to them.

52. Credit shall be given for regular work and progress during the years of study at the University. Candidates shall be required to submit for the inspection of Examiners their library and laboratory note-books countersigned by the Professor or Professors under whom they have worked.

53. No candidate shall be declared to have passed the Entrance examination unless he obtains not less than 40 per cent in English and 35 per cent in each of the other subject groups; provided that candidates who pass in English and obtain more than 50 per cent in all the subjects together, will be declared to have passed though they may not have obtained a minimum in one of the other groups.

54. A similar rule shall be applied in the case of those who wish to obtain qualifying certificates at the examination held at the end of the first year of the University course.

55. The B.A. examination shall be held in four divisions as follows:—

(1) English language. (3) Optional subject, and
(2) Second language. (4) Optional subject.

Those candidates who obtain not less than 35 per cent in each division shall be declared to have passed, provided they obtain 40 per cent of the total number of marks.

56. In the case of candidates who have failed to pass the examination, the Council shall have power to exempt them from submitting themselves to examination in divisions in which they have obtained not less than 60 per cent of marks in any examination for the B.A. degree held within two years previous to the date of application.

57. The names of successful candidates in the Entrance examination and in the first year Certificate examination shall be published in the gazette in alphabetical order.

58. In the B.A. examination, the names of those who obtain not less than 60 per cent of marks shall be arranged in order of merit, in the first division and of the rest in alphabetical order in the second division.

59. SCHEME OF EXAMINATIONS.

University Entrance Examination.

1. English.

i. Non-detailed study books for composition and composition exercises	1 paper (3 hours).
ii. Detailed study text-books	2 „

2. A Second Language.

i. Text-books	1 paper (3 hours).
ii. Composition and translation	1 „ 2 „

3. Optional Subjects.

(a) *Mathematics*	2 papers (3 hours).
(b) *Physics*	„ „ „
(c) *Chemistry*	„ „ „
(d) *Natural Science*	„ „ „

(e) *History.*		
Outlines of European History		2 papers (2 hours).
(f) *Elementary Economics*		1 paper (3 hours).
(g) *Logic*		1 paper (3 hours).
(h) *Sanskrit*—		
i. Prescribed books, Grammar and Prosody ...		1 paper (3 hours).
ii. Translation		1 paper (2 hours).
(i) *Persian*—		
i. Prescribed books and Grammar		1 paper (3 hours).
ii. Translation		,, (2 hours).

First Year Examination.

1. *English.*

i. Composition	1 paper (3 hours).
ii. Poetry and Drama	,, ,,
iii. Prose	,, ,,

2. *A Second Language.*

2 papers (3 hrs. and 2 hrs.).

3. *Optional Subjects.*

A.	(a) *Mathematics*	2 papers (2 hours each).
	(b) *Physics*	2 papers of 2 hours each, and practical examination, in each subject.
	(c) *Chemistry*	
	(d) *Zoology*	
	(e) *Botany*	
B.	(a) *History.*	
	i. Ancient History	1 paper (3 hours).
	ii. History of England	,, (2 hours).
	(b) *Economics and Political Science*—	
	i. British constitution	1 paper (3 hours).
	ii. Recent Economic History of England	,, (2 hours).
	(c) *Philosophy, Group I.*	
	i. Psychology	1 paper (3 hours).
	ii. Logic	,, (2 hours).
	(d) *Philosophy, Group II.*	
	i. Theory of Ethics	1 paper (3 hours).
	ii. Groundwork of Ethics	,, (2 hours).
	(e) *Sanskrit or Persian*—	
	i. Text-books	1 paper (3 hours).
	ii. Translation or composition	,, (2 hours).

Final Examination for the B.A. Degree.

1. *English.*

i. Drama	1 paper (3 hours).
ii. Poetry	,, ,,
iii. Prose	,, ,,
iv. Composition, General	,, ,,

2. *A Second Language.*

i. Text-books and Grammar	1 paper (3 hours).
ii. Composition and translation	,, ,,

3. *Optional Subjects.*

A.	(a) *Mathematics.*	
	i. Algebra and Trigonometry	1 paper (3 hours).
	ii. Geometry	,, ,,
	iii. Dynamics	,, ,,
	iv. Calculus and Astronomy	,, ,,

	(b) *Physics*	2 papers of 3 hours each, and practical examination, in each subject.
	(c) *Chemistry*	
	(d) *Geology*	
	(e) *Zoology*	
	(f) *Botany*	
B.	(a) *History:*	
	i. History of India	2 papers (3 hours).
	ii. History of Europe	" "
	(b) *Economics and Political Science.*	
	i. Economics	" "
	ii. Political Science	" "
	(c) *Philosophy, Group I.*	
	i. Theory of knowledge	1 paper (3 hours).
	ii. Outlines of European Philosophy	" "
	iii. Outlines of Indian Philosophy	" "
	iv. Elements of Philosophy	" "
	(d) *Philosophy, Group II*	
	i. Ancient Philosophy	1 paper (3 hours).
	ii. An Ethico-Political Treatise	" "
	iii. History of Political Thought	" "
	iv. Political Philosophy	" "
	(e) *Sanskrit or Persian.*	
	i. Text-books	1 paper (3 hours).
	ii. Grammar, Translation or Composition	" "
	iii. History of Language and Literature	" "
	iv. Unprepared translation	" "

CONVOCATION.

60. A Convocation for the purpose of conferring degrees shall be held annually at Mysore on such date as the Chancellor may direct.

61. The Council shall frame the rules of procedure for the purpose.

REGISTRATION OF GRADUATES.

62. The Council shall maintain a register in which a Graduate of any University resident in Mysore, or other Graduates when specially permitted by the Council may be registered, on the following conditions, namely :—

(i) that he pays an entrance fee of Rupees Five along with his application to the Secretary to be registered as a Graduate; and

(ii) that he agrees to pay an annual fee (in advance) of 2 rupees;

Provided that application for registration under this Ordinance shall be made within three years from 1st July 1916.

63. The annual payment of 2 rupees may be compounded at any time by payment of Rs. 25.

FEES.

64. A fee of Rs. 60 a year shall be charged for the courses of study for the Bachelor's Degree and shall be paid in eight monthly instalments.

65. Provision shall be made for awarding free studentships to a maximum of 33 per cent of the number of the students in each class. They shall be awarded by a Committee of the Principal and the Professors of each College who shall take primarily into consideration the poverty of the applicants.

66. The scale of fees for admission to the different Examinations of the University shall be as follows :—

	Rs.
i. Entrance Examination	 15
ii. B.A. or B.Sc. Degree Examination	 36
iii. B. T. Degree Examination	 30
iv. M.A. or M.Sc. Degree Examination	 50

67. The Council may modify the scale from time to time but not so as to enhance fees for students already admitted in colleges.

EXTENSION LECTURES.

68. The Council shall appoint a Committee of Professors and other persons to make arrangements for courses of lectures on suitable subjects for the benefit of those who are unable to attend the ordinary courses of study at the University, and to publish such of the lectures as may be approved by the Committee.

PUBLICATION WORK.

69. The Council shall also appoint a Committee, to be called the University Publication Committee, for printing and publishing approved works.

70. Works of merit recommended by the Committee may be published under orders of the Council at the cost of the University.

71. Special encouragement may be given to production of works of merit in the Kannada Language.

RECOGNITION OF SCHOOLS.

72. A High School already existing or newly established which is desirous of being recognised as a school competent to present candidates for the University Entrance Examination, shall apply to the Council by a letter addressed to the Secretary to the University.

73. The School shall furnish a preliminary statement showing :—

(*a*) that the recognition applied for is necessary in public interests,

(*b*) that the financial position of the school is sound and that the rates o fees levied are reasonable,

(*c*) that the school is under the management of a regularly constituted Committee on which the teaching staff is represented,

(*d*) that the number, qualifications, character and terms of appointment of the teaching staff are satisfactory,

(*e*) that the buildings in which the school is carried on and its surroundings are suitable and that the furniture is of the proper type and adequate,

(*f*) that due provision is made for the requirements of both teachers and pupils in respect of (1) a reference and lending library, (2) scientific apparatus and appliances, (3) maps, models, natural history collections, etc.,

(*g*) that the school authorities have made provision for maintaining discipline amongst the pupils and require pupils not living with their guardians to reside in duly supervised hostels or lodging houses,

(*h*) that no teacher is allowed to teach more than 50 pupils at the same time in the University Entrance Class.

74. On receipt of the application for recognition, and of such further information as it may require, the Council shall call for a report on the application from a person or persons deputed for the purpose. After considering the report of inspection the Council shall decide whether the school shall be recognised or not, and, if recognised, in what subjects.

75. If a recognised school desires to add to the courses of instruction in respect of which it is recognised, the procedure described in the foregoing rules, so far as may be necessary, should be followed.

76. The conditions of recognition or of the continuance of recognition shall include (1) that the school shall submit to periodical inspection by a person or persons deputed by the Council, and (2) that it shall submit a short annual report of working together with a list of the staff of the school and of changes therein and a full and complete statement of accounts by such date as the Council may fix.

77. It shall be competent to the Council at any time to cancel the recognition of any school for any one of the following reasons:—

(*a*) If a school for a period of three years in succession fails to pass 33 per cent of the candidates sent up for the University Entrance Examination.

(*b*) If the reports of the inspections received show that the school is no longer worthy of recognition.

(*c*) If it is found that any of the essential conditions of recognition are no longer fulfilled.

(*d*) For any other reasons considered to be sufficient by the Council, the reason to be specified and recorded.

No action shall be taken under this rule without giving the school authorities an opportunity of stating their own case.

78. The following High Schools are recognised as competent to present candidates for the University Entrance Examination:—

The Government High School, Bangalore ...	All subjects included in III of Ordinance 37.
The Maharaja's High School, Mysore ...	Do do
The Government High School, Shimoga ...	Subjects included in III (*b*) of Ordinance 37.
Do do Tumkur ...	Do do
Maharani's College, Mysore	Do do

RESIDENCE

79. Every student who does not reside with his parents, or guardians approved by the Vice-Chancellor, shall reside in the university hostels or in lodgings approved by the Council.

80. The Council shall appoint a Committee to deal with questions relatin to the residence of students.

GENERAL.

81. In matters not provided for in these Ordinances, the Senate or Council shall, till further Ordinances are duly framed, have power to frame subsidiary rules and to carry out all necessary functions and duties in such manner as may be convenient and reasonable, and in accordance with the spirit of the Regulation and Ordinances.

APPENDIX.

The University Entrance Examination.

A. ENGLISH.

(a) *Composition*:—

The elementary principles and methods of composition with exercises—

(i) in condensing the subject matter of portions of prose or poetry; and

(ii) in writing single paragraphs, narrative, descriptive, expository, on topics suggested by the books read or subjects of common knowledge to High School students; and

(iii) in writing complete essays of several paragraphs.

(b) *Literature*:—

(i) Detailed Study—

Poetry: Simple narrative or lyric.
Prose: Essays or short biography.

(ii) Non-detailed Study—

Two or three books: Greek stories, fiction, popular history or science, short biography or essays.

B. SECOND LANGUAGE.

(a) Kannada.

(a) *Text-books in modern Kannada Poetry and Prose.*
(b) *Composition on general subjects.*

(b) Telugu.

(a) *Text-books.*
(b) *Composition on general subjects.*

(c) Tamil.

(a) *Text-books.*
(b) *Composition on general subjects.*

(d) Sanskrit.

(a) *Detailed study of simple works prescribed from year to year.*
(b) *Elements of Practical Grammar.*
(c) *Translation from Sanskrit into English and* vice versa.

(e) Hindustani.

(a) *Text-books.*
(b) *Composition on general subjects.*

(f) Persian.

(a) *Detailed study of simple works prescribed from year to year.*
(b) *Elements of Persian Grammar.*
(c) *Translation from Persian into English and* vice versa.

(g) French.

(a) *Text-books and Grammar.*

(b) *Translation.*

C. OPTIONAL SUBJECTS.

(a) Mathematics.

Candidates will be required to be acquainted with the use of mathematical tables.

(1) ALGEBRA.

Algebraical laws and principles and their applications. Ratio and proportion. Theory of indices. Simple surds. Theory of Equations and expressions of the second degree. Simultaneous equations of the second degree in two unknowns. The three progressions. Interest and annuities.

(2) PLANE TRIGONOMETRY.

Measurement of angles. Trigonometrical functions and their relations to one another. Simple equations. Addition and multiplication formulæ. Solution of triangles.

[*N.B.*—Only a general outline of the subject is expected.]

(3) GEOMETRY.

(i) *Theory.*

Ratio and Proportion. Similar figures. Properties of triangles and circles. Easy deductions.

Ratio and Proportion.—Definition and elementary theorems connecting the antecedents and consequents.

A given straight line can be divided internally in a given ratio at one, and only one, point; and externally at one, and only one, point.

A straight line drawn parallel to one side of a triangle cuts the other two sides, or those sides produced, proportionally; and the converse.

If the vertical angle of a triangle is bisected internally or externally, the bisector divides the base internally or externally into segments which have the same ratio as the other sides of the triangle; and the converse.

In equal circles, angles, whether at the centres or circumferences, have the same ratio as the arcs on which they stand.

Triangles and parallelograms of equal altitude are to one another as their bases.

If two triangles have one angle of the one equal to one angle of the other, their areas are proportional to the rectangles contained by the sides about the equal angles. Similarly for parallelograms having one angle of the one equal to one angle of the other.

Similar Figures.—If two triangles are equiangular their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

Two triangles are similar, if the sides of the one are respectively parallel or perpendicular to the sides of the other.

If two triangles have two sides of the one proportional to two sides of the other, and an angle in each opposite one corresponding pair of these sides equal, the angles opposite the other pair are either equal or supplementary.

If from the right angle A of a right angled triangle ABC, AD is drawn perpendicular to BC, then (1) AD is the mean proportional between BD and DC, (2)

BA is the mean proportional between BD and BC and (3) CA is a mean proportional between CB and CD.

If two triangles are similar, their corresponding lines (such as medians, altitudes, inradii,) are to one another in the ratio of their corresponding sides.

Similar triangles are to one another as the squares on their corresponding sides.

Two similar polygons can be divided into the same number of triangles similar to each other and similarly placed; and the converse.

The perimeters of two similar polygons are to each other as any corresponding sides.

Areas of similar polygons are proportional to the squares on corresponding sides.

Properties of Triangles.—The three medians of a triangle meet in a point, and this point is a point of trisection of each median, and also of the line joining the circumcentre to the orthocentre.

If D is a point in the side BC of a triangle ABC such that $BD = 1/n$ BC, then

$$(n-1)\,AB^2 + AC^2 = n.\,AD^2 + (1-1/n)\,BC^2.$$

The perpendiculars from the vertices of a triangle on the opposite sides meet in a point, and the distance of each vertex from the orthocentre is twice the perpendicular distance of the circumcentre from the side opposite to that vertex.

The circle through the middle points of the sides of a triangle passes also through the feet of the perpendiculars of the triangle and through the middle points of the three lines joining the orthocentre to the vertices of the triangle.

If a perpendicular drawn from the vertex to the base of a triangle is produced to meet the circumcircle, then the distance of this point of intersection from the base is equal to the distance of the orthocentre of the triangle from the base.

The feet of the perpendiculars drawn on the sides of a triangle from any point P on the circumcircle of that triangle are collinear.

If the vertical angle of a triangle is bisected by a straight line which cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base together with the square on the straight line which bisects the angle.

If from the vertical angle of a triangle straight line is drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

Properties of Circles.—The locus of the points of intersection of tangents drawn at the extremities of chords of a circle which pass through a fixed point, is a straight line.

If the polar of A passes through B, then the polar of B passes through A.

If P and Q are any two points in the plane of a circle whose centre is O, then OP bears to OQ the same ratio as the perpendicular from P on the polar of Q bears to the perpendicular from Q on the polar of P.

The locus of points from which the tangents to two given co-planar circles are equal is a line perpendicular to the line of centres.

In two circles, if any two parallel radii are drawn (one in each circle), the straight line joining their extremities cuts the line of centres in one or other of two fixed points (called centres of similitude).

If through a centre of similitude S of two circles, a line is drawn cutting the circles, radii to a pair of corresponding points are parallel.

If through a centre of similitude of two circles, a line is drawn cutting the circles, then the rectangle under the distances of one pair of non-corresponding points from S is equal to the rectangle under the distances of the other pair of non-corresponding points from S, and each of these rectangles is constant.

In a cyclic quadrilateral the rectangle contained by the diagonals is equal to the sum of the rectangles contained by the opposite sides.

(ii) *Practical Work.*

Construction of the circumscribed, inscribed and escribed circles of triangles and regular polygons. Construction of triangles and quadrilaterals from given data, and their division in any given ratio. Areas of polygons. Construction of similar figures.

(b) Physics.

Mechanics.—Units of length, mass and time. Position, change of position, rate of change of position, rate of change of speed in a straight line. Force, energy, work and power. The vector parallelogram, simple systems of parallel forces, centre of gravity. Simple machines. The simple pendulum treated experimentally, gravitational acceleration.

Hydrostatics.— Fluid pressure. Principle of Archimedes with simple applications. Determination of specific gravity. Pressure of a gas and its measurement: atmospheric pressure. Boyle's Law. Simple piston pumps.

Heat.—Distinction between quantity of heat and temperature. Measurement of temperature by liquid-in-glass thermometers. Expansion. Specific heat and its determination. Fusion, evaporation, latent heat. Vapour pressure. Conduction, convection and radiation. Heat and work. Description of the steam engine.

Sound.—Production and propagation. Velocity in air. Reflection; echoes. Loudness and pitch of musical notes.

Magnetism.—Magnets and magnet poles. Law of force. Shape of fields due to straight and bent magnets. Magnetism of Earth: the magnetic compass. Simpler magnetic properties of iron and steel.

Electricity.—Simple voltaic cell. Electric current. Chemical effects of current. Magnetic field of current. Galvanometers. Electro-magnets. Heating effect of currents. Electromotive force: resistance and its comparison by simple substitution methods. Electric telegraphs. Electric bells. Electric light. Electric direct current motors.

Light.—Laws of reflection, and refraction with very simple applications. Lenses and mirors. Telescopes and microscopes. Dispersion. Production of a spectrum.

(c) Chemistry.

Objects of study of Chemistry: to ascertain composition of materials; to investigate changes in composition; and from the foregoing to deduce general laws.

Mixtures and compounds: methods of resolving mixtures into their constituents; examples; sand and sugar by solution and filteration; salt and water by evaporation; alcohol and water by distillation; sand and sal ammoniac by sublimation; sulphur and iron magnetically; copper sulphate and water by crystallisation.

Chemical change: combination illustrated by sulphur and iron, sulphur and oxygen, candle and oxygen, quicklime and water. Decomposition illustrated by heating sugar, action of sodium on water, heating mercuric oxide, heating lead nitrate. Replacement illustrated by zinc and sulphuric acid, zinc and copper sulphate. Double decomposition illustrated by common salt and silver nitrate.

Ultimate products of decomposition; elements: Number of elements known. Examples of commonly occurring elements; oxygen, nitrogen, silver, gold, iron, sulphur, carbon.

Combination consists in union of elements with elements, elements with compounds, or compounds with compounds, a new compound being formed in every case. Burning as a special case of combination. Burning of phosphorus, of sulphur, of magnesium, and of a candle. Rusting of iron, oxidation of mercury and of copper. Products of burning or oxidation always heavier than material burnt or oxidised. Water and carbonic acid as products of combustion.

Composition of air as deduced from experiments on combustion. Reasons for regarding air as a mixture. The active and inactive constituents of air.

Oxygen: Discovery. Preparation. Properties. Comparison of combustion in oxygen and air. Character of oxygen compounds as illustrated by oxides of phosphorus, sodium, and mercury. Meaning of acids and bases; their characteristic properties.

Hydrogen: Preparation from sodium and water; from water by electrical decomposition; from acids by the action of metals such as iron and zinc; from caustic alkalies by the action of aluminium or zinc. Properties Water a compound of hydrogen and oxygen.

Composition of compounds determined: (1) By analysis, (2) by synthesis, illustrated by the case of water. Methods of carrying out these processes. Composition of water by volume and by weight. Guy Lussac's Law of Volumes. Constancy of composition of water. This constancy of composition characteristic of all compounds. Law of definite proportions. Properties of water; solvent action on solids and gases, illustrated by solutions of copper sulphate, sugar, air and carbon dioxide. Nature of rain water, sea water, spring and river water. Purification of water: distillation. Crystals and crystallisation; water of crystallisation. Extraction of salt from sea water.

Nitrogen: preparation from air. Properties.

Nitric acid: preparation from nitre; properties. Formation and nature of salts. Nitrous oxide, nitric oxide, and nitrogen peroxide.

Ammonia: preparation; properties; power of neutralising acids; solubility. Ammonium chloride and ammonium nitrate and their behaviour on heating.

Carbon: Occurrence and different forms. Properties and uses. When burnt forms carbonic dioxide. This gas always formed when carbon compounds are burnt; hence wood, candles, oil, all contain carbon. Preparation and properties of carbon dioxide; action on lime water; product of respiration of animals and plants.

Sulphur: occurrence and different forms; properties; when burnt forms sulphur dioxide.

Sulphuric acid: properties and uses.

Chlorine and hydrochloric acid: preparation of hydrochloric acid from common salt; properties of the gas and of its solution in water. Chlorine from hydrochloric acid and manganese dioxide; combination of chlorine with hydrogen and with sodium to form hydrochloric acid and common salt. Bleaching action.

Phosphorus: different forms; their properties and uses.

Silicon: a constituent of sand. Occurrence of silica free and in combination.

General properties of non-metals and metals.

Sodium and potasium: occurrence and properties. Common salt, sodium carbonate and bicarbonate, caustic soda, potasium nitrate, potasium chlorate, caustic potash.

Calcium: occurrence as carbonate. Production of lime from limestone; properties of lime; mortars. Calcuim sulphate: gypsum and plaster of paris; calcium chloride; bleaching powder.

Occurrence, general method of preparation, properties and uses of zinc, iron, lead, silver, mercury, copper and aluminium. Properties of their more important compounds.

Practical Work.

The practical course will aim chiefly at developing facility in the ordinary methods of manipulation, and as regards subject matter will follow the course given in Smith's "Laboratory Outline of Elementary Chemistry," omitting the portion dealing with ionisation.

(d) Natural Science.

ELEMENTARY BOTANY.

[NOTE.—The work will be chiefly practical, if necessary, with the aid of a simple lens. There will be no detailed reference to Histology except where necessary to understand the elements of plant physiology. The candidate will be required to draw and describe parts of plants.]

1. *External Morphology.*—The root, stem, bud, and bud scales, leaf, flower, fruit and seed; their component parts, chief modifications and their functions treated practically.

2. *Systematic Botany.*—The general principles of classification and the characteristics of the following natural orders viewed from an elementary standpoint:—

Malvaceæ, Leguminasæ, Rubiaceæ, Compositaeæ, Apocynaceæ, Asclepiadaceæ, Labiatæ, Euphorbiaceæ, Palmeæ, Orchidaceæ, Scitamineæ and Gramineæ.

3. *Ecology.*—A brief consideration of the principal modifications of the stems of the desert and water plants and general principles of plant distribution from a geographical and ecological point of view.

4. *Physiology.*—Germination of seed, and the conditions necessary for it; functions of root, leaf, flower and pollination; simple experiments to illustrate the above.

Practical Work.

Laboratory note books of approved form for record of observations will be maintained.

OUTLINES OF HUMAN PHYSIOLOGY.

[NOTE.—The subject will be treated from a practical standpoint and all references to Histological details will be omitted.]

The leading facts concerning the chief tissues of the body; the human skeletion; the principal joints and the action of the muscles; the nature and function of blood; the position and arrangement of viscera in man, circulatory and respiratory organs; food, its nature, digestion and absorption; the principal glands and their functions; waste, its nature and mode of elimination; temperature of the body and its maintenance; the chief functions of the central nervous system, nerves and sensory organs.

ELEMENTS OF ZOOLOGY.

A brief consideration of the external characters of the following animals:—

Earthworm, spider, scorpion, cockroach, beetle, butterfly, caterpillar, fish, frog, lizard, snake, bird, bat, cat, rabbit, cow and horse.

(These animals will be studied in such a way as to bring out the relation which their form bears to their habits and mode of life.)

(e) History.

OUTLINES OF EUROPEAN HISTORY.

(f) Economics.

ELEMENTARY ECONOMICS.

(g) Logic and Scientific Method.

(h) Sanskrit.

(*a*) *Detailed study of books—both in prose and verse—prescribed from year to year.*

(*b*) *The Elements of Sanskrit Grammar and Prosody as in Macdonnell's "Sanskrit Grammar for Beginners" or Kale's "Smaller Sanskrit Grammar"; and,*

(*c*) *Translation of unprepared passages from Sanskrit into English and* vice versa.

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PART III.

Legislative Measures and Rules thereunder.

Abstract Proceedings of the Mysore Legislative Council.

The Council met in the Public Offices Buildings, Bangalore, on Friday the 28th April 1916, at 12 noon.

PRESENT.

SIR M. VISVESVARAYA, B.A., L.C.E., M.INST.C.E., K.C.I.E., Dewan (Presiding).

Ex officio Members.

1. A. R. BANERJI, ESQ., I.C.S., M.A., C.I.E., First Member of Council.
2. K. S. CHANDRASEKHARA AIYAR, ESQ., B.A., B.L., Second Member of Council.

Additional Members.

Official.

1. RAJAMANTRAPRAVINA DEWAN BAHADUR J. S. CHAKRAVARTI, ESQ., M.A., F.R.A.S.
2. DEWAN BAHADUR C. SRIKANTESVARA AIYAR, ESQ., B.A., B.L.
3. P. RAGHAVENDRA RAO, ESQ., B.A., B.L.
4. RAO BAHADUR M. SHAMA RAO, ESQ., M.A.
5. D. M. NARASINGA RAO, ESQ., B.A., B.L.
6. C. S. DORASWAMI IYER, ESQ., B.A., B.L.
7. C. S. BALASUNDARAM IYER, ESQ., B.A.